

Feeding Nonfat Dried Milk to Early-Weaned Beef Calves  
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Placing early-weaned beef calves on growing rations that contain nonfat dried milk (NDM), made available to Utah beef producers by the USDA, may be an option in late summer, particularly for drought-stressed summer range or pasture.

Earlier reports have indicated that composition of Non-Fat Dry Milk is as follows: Protein: 34-37%, TDN: 90%, Lactose: 50-52%, Fat: .6-1.25%, Ash: 8.2-8.6%, Calcium: 1.35%, Phosphorus: 1.1% and Potassium 1.7%

- Protein is 80% casein and 20% whey and is essentially 100% degraded in the rumen. (Taniguichi et al., 1995, Journal of Animal Science 73:236; Koster et al., 1996, Journal of Animal Science 74:2473; Stock et al., 1986, Journal of Animal Science 63:1561).
- Energy is equal to or better than corn. Contains 50% lactose which is rapidly degraded in the rumen.
- Source of rumen degradable protein for low-quality forage diets – stimulates microbial growth. (Stock et al., 1986, Journal of Animal Science 63:1574; Hendrix, et al., 1973, Nebraska Beef Cattle Report 73:17; Prokop et al., 1976, Nebraska Beef Cattle Report 76:37).

Example rations for a 400 lb early-weaned beef steer calf to gain 2.0 lbs/day using NDM are shown below. Prices for the various feedstuffs were based on: alfalfa hay - \$100.00/ton, corn grain - \$5.00/cwt, corn silage - \$35.00/ton and NDM - \$10.00/ton (handling costs).

Ration 1				Ration 2			
Feedstuff	lbs/day	% Diet (As Fed)	% Diet (DM Basis)		lbs/day	% Diet (As Fed)	% Diet (DM Basis)
Alfalfa Hay	8.0	68.1	67.6		3.0	13.6	23.0
Corn Silage					15.0	68.2	46.0
Corn Grain	3.3	27.7	27.8		3.0	13.6	23.0
NDM	.50	4.3	4.6		1.0	4.5	8.0
Cost/day	\$.56				\$.57		

These rations are balanced for energy and protein but supplemental vitamins and minerals may be required depending on local individual circumstances. As with all rations, proper bunk management and animal husbandry practices must be followed. Other feedstuffs could substitute for those used in the examples, such as barley grain, grass hay, or others.

Consult with your County Agent or qualified nutritionist if considering feeding NDM to early-weaned beef calves.